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Psychosocial factors associated with suicide attempts, ideation and future risk in lesbian, gay and bisexual youth: The Youth Chances Study

Short title: Suicidality in Lesbian, Gay and Bisexual Youth

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Abstract

Background: Lesbian, gay and bisexual (LGB) youth have elevated suicidality rates.

Aims: To investigate LGB-related and other factors associated with suicide attempts, suicidal ideation and future suicide risk in a large UK sample.

Method: Logistic regression was used to investigate factors associated with suicidality in 3275 LGB young adults from the Youth Chances project.

Results: Suicide attempts (lifetime) were reported by 13.6% of participants; 45.2 % had suicidal ideation in the past year and 9.5% said future suicide attempts were likely. LGB stigma and discrimination experiences were significantly associated with all three aspects of suicidality. These included school stigma factors (e.g. teachers not speaking out against prejudice, lessons being negative about sexual minorities), negative reactions to coming out from family and friends, and LGB-related harassment or crime experiences. Bisexuality, not feeling accepted where one lives, younger sexual minority identification and younger coming out were also associated with suicidality. Significant non-LGB factors included female gender, lower social support, anxiety / depression help-seeking, abuse / violence and sexual abuse.

Conclusion: A wide range of LGB-stigma and discrimination experiences are associated with increased suicidality in LGB youth. Health, social care and education professionals supporting young people should also address LGB-specific risk factors.

Keywords: Sexual orientation, youth, prejudice, discrimination, stigma.

Lesbian, gay and bisexual (LGB) young adults are at increased risk of suicidality relative to heterosexual youth (Marshall et al., 2011; Miranda-Mendizabal et al., 2017). A meta-analysis indicated that their relative risk increases in line with suicidality severity, from suicidal ideation (OR 1.96) through intent or plans (OR=2.20), suicide attempts (OR = 3.18) and suicide attempts needing medical attention (OR=4.17) (Marshall et al., 2011). Risk for death by suicide is also increased in LGB children and youth (British Columbia Child Death Review Unit, 2008). Bisexual youth are at even higher risk for suicidality than lesbian or gay individuals (Marshall et al., 2011).

To address these suicide disparities, improved understanding of risk factors is required, particularly LGB-specific risk factors (Miranda-Mendizabal et al., 2017). Furthermore, many health professionals do not ask about sexual orientation in mental health assessments (Parameshwaran, et al., 2017). Improved understanding of LGB suicide risk factors could help professionals feel more confident in both assessing the relevant issues and helping to support the young person to address them, where appropriate.

Stigma theories (e.g. Link & Phelan, 2014) and LGB-specific Minority Stress theories (Meyer, 2003; Michaels et al., 2015) suggest that the elevated rates of suicide in LGB individuals are due to the impact of stigma and discrimination. There is increasing evidence to support this. LGB-victimisation and internalized homophobia have been shown to be associated with suicidality (Hershberger et al., 2005, Lea et al., 2014; Liu & Mustanski, 2012; Michaels et al., 2016; Mustanski & Liu, 2013; Rivers, 2004). However, little is known about the risks associated with different types of victimization such as physical assault, theft, blackmail, property damage or being outed. Regarding interpersonal reactions relating to LGB stigma, suicide attempts have been shown to be associated with negative reactions from parents (Van Bergen et al., 2013) and parental rejection (Ryan et al., 2009). Reactions of siblings or the first friend one came out to have not been reported in relation to suicidality. Losing friends because of one's sexual orientation has been shown to be associated with increased suicide attempts (Hershberger et

al.,1997; Puckett et al., 2016). School-based LGB-related factors have not been fully investigated, although one study found that LGB students in schools with gay-straight alliances reported fewer suicide attempts (Poteat et al., 2012). Support from teachers and students against LGB prejudice and school lessons being anti-LGB have not been investigated in relation to suicidality. Younger ages of same-sex attractions and coming out are associated with increased risk of suicide attempts and death by suicides (Mustanski & Liu, 2014; Skerrett, Kõlves & De Leo, 2016), which may be due to greater exposure to LGB stigma or victimization.

Research investigating the risk factors associated with *future* suicide risk in LGB youth is very limited. A US study found that a previous suicide attempt increased the odds of suicide in the following year tenfold (Mustanski & Liu, 2014). Depressive symptoms and hopelessness also predicted suicide attempts in univariate analyses. The authors are not aware of studies reporting factors associated with LGB participants' estimated future suicide risk.

The current study uses secondary data from the Youth Chances study to investigate a wider range of LGB-specific risk factors associated with suicidality than previous research, including novel factors not previously investigated. School stigma-related factors (teachers and students not consistently speaking out against LGB stigma and school lessons referring negatively to LGB issues) and LGB victimisation were hypothesised to be associated with greater suicidality. Stigma-related interpersonal factors investigated included bad reactions to coming out from parents and the first sibling and friend who were told, and not feeling accepted where one lives. A younger age of identifying as LGB and coming out at a younger age were hypothesised to be associated with increased suicidality, as they were likely to be associated with greater stigma exposure and internalisation. Unlike most previous studies, the current study also includes a wide range of non-LGB factors to allow for a comprehensive simultaneous assessment of factors associated with suicidality. Non-LGB factors hypothesised to be associated with suicidality were abuse or violence from someone close, childhood sexual abuse, lower social support, alcohol misuse, drug use and having sought help for anxiety or depression, in line with

previous general population research (Hawton et al., 2012). Exploratory multivariate regression analyses were undertaken to investigate whether LGB-specific risk factors remained significantly associated with suicidality when entered simultaneously with other risk factors.

Method

Participants and procedure

Participants were 3275 young people identifying as lesbian, gay or bisexual who responded to suicide questions in the Youth Chances survey, which was funded by the UK Big Lottery to investigate the lives of 16-25 year olds. Sexual orientation was assessed with the question "Do you consider yourself to be: "heterosexual or straight", "gay or lesbian", "bisexual", "not sure-questioning", "something else". Only participants identifying as gay, lesbian or bisexual were included in this study. Participants whose sex assigned at birth was different to their current gender identity, or who had considered or done something to change their gender identity, were not included in this study.

The Youth Chances study was approved by the University of Greenwich Research Ethics Committee. The current study was approved by King's College London Research Ethics Committee. Participants were recruited via social media links to a study website, advertisements in the LGBT press and at Gay Pride events, through LGBT and youth organizations and with snowball sampling. After particularly sensitive questions (e.g. regarding suicide, sexual abuse, victimisation) and at the survey end, participants were reminded about organisations that could provide support. Data were collected between May 2012 and April 2013.

Measures

Suicidality Outcome Measures

Suicidality was assessed by the Suicide Behaviors Questionnaire-Revised (Osman et al., 2001).

To investigate suicide attempts, ideation and future risk separately, variables were derived as follows:

1) **Suicide attempts**: The question: "*Have you ever thought about or tried to kill yourself?"* had response options *"Never", "It was just a brief passing thought", "I have had a plan at least once to kill myself but did not try to do it", "I have had a plan at least once to kill myself and really wanted to die", I have tried to kill myself, but did not want to die" and " I have tried to kill myself and really hoped to die".* No past suicide attempts or only thoughts or plans were combined as "0" while attempts to kill oneself, with or without wanting to die, were coded as "1".
2) **Suicidal ideation** in the past year: The question "*How often have you thought about killing yourself in the past year?"*; had response options *"Never", "1 time", "2 times", "3-4 times" and "5 or more times"*). No such thoughts were coded as '0'; all other responses were '1'.
3) **Future suicide risk** was assessed with the question *"How likely is it that you will attempt suicide someday?"*. Responses of "no chance", "rather unlikely", "unlikely", or the response to Question 1 indicating no lifetime experience of suicidal ideation were coded '0' and 'likely', 'rather likely' or 'very likely' were '1'.

Risk factors: Non-LGB

Social support was assessed with "If you had a problem, how many people would you say you could count on for advice and support?", with options 0,1,2,3,4,5 and "6 or more". Responses were recoded into "five or fewer friends" versus "six or more". The questions "Have you ever gone for medical help for anxiety or depression?", "Have you experienced abuse or violence from someone close to you?" and "Have you ever experienced sexual abuse" had "yes / no" responses.

Alcohol use was assessed with the AUDIT-C (Bush et al., 1998) which has 0-12 scores, with higher scores indicating greater alcohol risk. Drug use was assessed with the question "Do you take the following drugs, and if so, how often?" with response options "never, a few times a

year, less than monthly, monthly, weekly, daily". The list was marijuana, amphetamines, cocaine, ecstasy, inhalants, sedatives, hallucinogens, heroin, gamma hydroxybutyrate (GHB) / gamma butyrolactone (GBL), and "another illegal drug". Alternative drug names were also provided. Responses were recoded to indicate weekly or less than weekly use of any drug.

LGB-specific factors

Lifetime LGB-specific victimisation was assessed with the question, "Have you ever experienced any of the following because you are LGBTQ or people thought you were LGBTQ?" with eight experiences to be rated. (For more information about these items, see Data Preparation section below).

Participants were asked "How old were you when you first thought you might be lesbian, gay, bisexual or questioning your sexuality?"; responses were recoded to indicate ≥10 years versus <10 years to approximately coincide with puberty. Responses to the question "How old were you when you first told someone you were lesbian, gay, bisexual or questioning your sexuality?" were recoded into below age 16 or aged 16 and above. To assess whether teachers were consistently supportive against LGBTQ stigma, responses to the question "At school did you have teachers and school staff speaking up against homophobia, biphobia and transphobia" were recoded into '1' if the participant indicated 'yes' and '0' if the participant indicated 'no', 'sometimes' or 'don't know'. The same recoding was applied to a similar question about students speaking up. Responses to the question "At your school, how were LGBTQ issues and LGBT people and their achievements talked about or presented during lessons" were recoded into 'negatively' (1) if they ticked "referred to negatively" and the other options "included and respected" and "ignored or not mentioned" were scored as 0. Participants responses to the following statement "I feel like I am accepted in the area where I live now" were recoded from 'disagree' or 'strongly disagree' to indicate lack of acceptance versus all other responses (neither agree or disagree, agree, strongly agree). For the question "How many of your friends are

LGBTQ?", responses of "none", "about a quarter", "about half"," about three quarters" and "nearly all" were recoded to indicate "none or less than a quarter" versus "half or more".

The item "On a scale of 1 to 10, what was the reaction of these people in your life when you told them you were lesbian, gay, bisexual or questioning your sexuality?" was used to measure the responses of the mother, father, sibling and the first friend that participants "came out" to. On the scale, 1 was labelled as “very bad” and 10 indicated “very good”. Responses from 1-5 were used to indicate a bad reaction and responses 6-10 indicated a good reaction.

Data preparation

For the eight questions about LGB-specific victimisation, principal components analysis with oblique rotation was undertaken. This indicated two components which each had four items with loadings greater than 0.6: 1) LGBTQ harassment (being outed as LGB or questioning your sexuality; name calling/verbal abuse; threat/intimidation; harassment); 2) LGBTQ crime (blackmail, theft, property damage; physical assault). Correspondingly, two variables were created, indicating the presence or absence of LGBTQ harassment and LGBTQ crime.

Statistical analysis

Independent univariate and multivariate logistic regression analyses were conducted for the three suicidality measures. Due to the multiple testing in the univariate analyses, a Bonferroni-corrected alpha value of $p<0.0023$ (i.e. $p<0.05$ divided by 22) was used to determine which factors would be included in the multivariate analyses. Analyses were conducted using SPSS v22.

RESULTS

Characteristics of the sample

Of the 3275 participants, 1615 (49.3%) were female and 1660 (50.7%) were male. The mean reported age was 20.4 years (SD 2.7). Regarding sexual orientation, 2416 (73.8%) were gay or lesbian and 859 (26.2%) identified as bisexual (648 females and 211 males). Self-reported social class numbers were 1115 (34.0%) working class, 1707 (52.1%) middle class, 49 (7.7%) upper class and 296 (9.1%) were 'other' or 'not known'. Religious identification was as follows: 2427 (80%) said 'none', 400 (13.2%) were Christian, 27 (0.9%) were Buddhist, 21 (0.7%) were Muslim, 20 (0.7%) were Jewish, 3 (0.1%) were Hindu, 1 (<0.01%) was Sikh, and 36 (4.5%) were 'Other'. For those reporting their ethnicity, 2682 (84.2%) were White British / English / Welsh / Scottish / Northern Irish, 246 (7.8%) were from another White background, 141 (4.4%) were from mixed ethnic groups, 64 (2%) were Asian / Asian British, 37 (1.2%) were Black / African / Caribbean / Black British and 15 (0.5%) were from another ethnic background. Only 92 participants (2.8%) had not told anyone that they were LGB.

Suicidality and Risk factors

Tables 1 show responses to the three suicide questions and Table 2 presents the proportion of participants with each hypothesized risk factor.

Univariate associations between risk factors and three suicide variables

For past suicide attempts, significant associations were found with all hypothesized factors and most factors were associated with suicidal ideation and future risk (see Table 3). For LGB-specific factors, the strongest associations were for LGB crime experiences, not feeling accepted where one lives, bad reactions from the first friend they came out to, and school lessons referring negatively to LGB issues. For non-LGB factors, the strongest associations were for

previous depression / anxiety help-seeking, childhood sexual abuse, abuse or violence from someone close.

Multivariate associations between risk factors and three suicide variables

The factors that had been significant at $p<0.0023$ (i.e. after adjustment for multiple testing) in the univariate analyses were entered simultaneously in multivariate analyses.

Several LGB-specific factors remained significant predictors in multivariate analyses alongside general risk factors, including school stigma, not feeling accepted where one lives, LGB-victimisation, bisexuality and coming out before the age of 16; for details of the results see Table 4. If previous suicide attempt was added, this was the strongest predictor of future suicide risk (Table 4, final column).

The variables about reactions of family members were not included in the primary set of multivariate analyses as they would have severely restricted the sample size, due to only including participants who had come out to the relevant family members. Secondary multivariate analyses were conducted that did include the variables about reactions of family members where these had had univariate associations of $p<0.0023$; family reactions were not significantly associated with the three suicide outcomes in these analyses.

Discussion

The elevated rates of suicide attempts and ideation in this large UK sample are consistent with a smaller recent UK study (Nodin et al., 2015). A recent US study reported that the disparity between gay and heterosexual boys was still present may be narrowing; however, there was no evidence of a narrowing gap for bisexual boys or girls or for lesbians (Peter et al., 2017). The continuing disparities indicates that an international approach to suicide prevention (Arensman, 2017) in LGB youth may be helpful. This is the first large LGB study about self-reported *future* risk; 9.5% of participants reported that they are likely to attempt suicide in the future. This

contrasts to 3% of a general college sample giving this response (Farabaugh et al., 2015). Bisexual youth reported even higher suicidality than lesbian or gay participants, in line with previous findings (Pompili et al., 2014). It has been suggested the bisexual individuals are exposed to greater stigma as they can experience this from both heterosexual and lesbian / gay individuals (Friedman et al., 2014).

The findings of an association between LGB victimization and suicidality are consistent with stigma and minority stress theories (Link & Phelan, 2014; Meyer, 2003). Similarly, a previous study reported that LGB-victimization contributes to disparities in emotional distress between LGB and heterosexual UK youth (Robinson et al., 2013). Experience of a more severe form of LGBTQ victimization (criminal offences such as physical assault, blackmail, property damage or theft) was more strongly associated with the suicide outcomes than more verbally-based LGBTQ-victimisation. Rates of both forms of victimisation were worryingly high, especially in such a young sample: 30% had experienced at least one type of LGBTQ-related crime and 86% had experienced LGBTQ harassment such as threats or name-calling. The association between LGB victimization and adverse outcomes requires addressing at multiple levels including protective legislation, education / work-based policies and anti-bullying campaigns (Rivers, 2012).

This study identified LGB-stigma risk factors that have been neglected in previous research, including school factors. School lessons referring negatively to LGBTQ issues and school staff not consistently speaking up against LGBTQ prejudice were associated with future risk and suicidal ideation respectively, in multivariate analyses. This is the first time that school-based LGBTQ factors have been shown to be associated with suicidality independently from general risk factors and LGBTQ victimization. These findings suggest that schools remain unsafe for LGB youth, despite school inspectors being trained to investigate schools' actions to prevent LGB bullying. This highlights the importance of schools working to implement LGBTQ-

inclusive curricula and making specific efforts to ensure that schools are safe places for LGBTQ students and staff. Governmental interventions are likely to be necessary for this to occur.

Coming out below the age of 16 years was associated with all three suicide outcomes and remained significantly associated with suicide attempts in multivariate analysis. Similarly, participants who first thought that they were LGB at a younger age were at greater risk of suicidality, in line with US research (Mustanski & Liu, 2013). Earlier awareness or disclosure of sexual minority status have been shown to be associated with more harassment, emotional and physical abuse by family members, and sexual assault in female US adult sample (Corliss et al., 2010). It has been suggested that coming out at an earlier age places the individual at greater risk of difficulties in forming a positive sexuality-related identity, particularly in the context of lower family support and anti-LGB attitudes from others (Skerrett et al., 2016). Interventions may need to start before puberty to help keep children safe from harmful experiences and prevent suicidal behaviors. Future research should also investigate whether early sexual orientation awareness is associated with greater stigma internalisation.

The potential role of stigma-related interpersonal factors on suicidality was supported. Not feeling accepted where one lives doubled the risk of suicide attempts and suicidal ideation in multivariate analyses. This is consistent with findings that LGB people who died by suicide had lower acceptance from their mother and father than control participants (Skerrett, Kõlves, & De Leo, 2016). The finding that negative reactions from parents and peers to coming out is associated with increased suicidality replicates previous studies (Ryan et al., 2009, Van Bergen et al., 2013). The current study expands our understanding by showing that reactions to coming out from the first sibling and first friend were also both associated with suicidality. Reporting that most of one's friends are LGB was associated with increased risk of past and future suicide. This may be a marker for having lost heterosexual friends because of one's sexual orientation, which is associated with increased suicidality (Hershberger et al.,1997). However, it could be due to other factors such as greater exposure to suicidality in one's friends.

Non-LGB risk factors for suicidality identified in general population studies were also found in this LGB sample. Previous help-seeking for depression / anxiety showed the strongest associations with suicidality, in line with previous research (Mustanski & Liu, 2013). However, LGB factors such as LGB victimization, coming out below the age of 16, school staff not speaking out, and school lessons mentioning LGBT issues negatively were all significant independently associated with suicidality in multivariate analyses which included help-seeking for depression / anxiety. This indicates that LGB specific risk factors may have direct effects on suicidality rather than only via mental health problems.

Past suicide attempts showed the strongest associations with self-reported future risk (OR 8), in line a prospective study of suicide attempts (Mustanski & Liu, 2013). Experience of abuse or violence from someone close, child abuse and lower social support were independently associated with approximately double the risk for suicidality in multivariate analyses, consistent with US research identifying these as risk factors (Mustanski & Liu, 2013, Mustanski et al., 2014). Female gender was associated with the three suicide outcomes although in multivariate analyses it was only significant for suicide attempts. In the general population, male youth are at greater risk than females for completed suicides (Värnik, 2012) and this gender difference requires investigation in LGB youth.

With cross-sectional data, it cannot be concluded that the factors associated with suicidality are related in a causal manner. Other unmeasured variables, such as current mood, could be associated with both suicidality and reporting of the potential risk factors. Similarly, it was not appropriate to undertake mediational analyses with cross-sectional data. Another limitation is that targeted recruitment was necessary to obtain a large sample; it cannot be assumed that the participants are representative of UK LGB youth. Sexual identity and not behaviors or attractions were assessed. Furthermore, the participants were mainly white; more research is needed into how sexual orientation and race may intersect in relation to risk for suicidality (Shadick, Dagirmanjian & Barbot, 2015). The study was limited by using secondary

data, investigating factors available in the dataset rather than being designed to test a theoretical model such as the interpersonal theory (Joiner, Buchman-Schmitt, Chu & Horn, 2017) or the integrated motivational-volitional model (O'Connor, 2011). Instead, the aim was to provide information about risk factors that is potentially helpful to those supporting LGB youth and in guiding future research.

Although these factors require replication in prospective research, tentative implications can be drawn. Those supporting vulnerable youth should ask about same-sex attractions and assess, and where possible address, LGB-specific risk factors for suicide. For example, the young person may require support regarding ongoing LGB stigma or victimisation, including from family members (Craig & Austin, 2016). However, fear of stigma / discrimination can impede mental health engagement and other community members (e.g. teachers) should also be trained in suicide prevention for LGB youth (Coppens et al., 2014). Furthermore, although suicide risk assessment is particularly important with individuals experiencing mental illness, those supporting LGB youth should be aware that other factors are also independently associated with suicidality.

LGB youth suicide prevention is needed. Societal-level anti-stigma interventions may be required to reduce LGB victimization. The impact of interventions targeting teacher responses to LGB stigma and discussion of LGB issues in class and reactions of family and friends when the young person comes out should be investigated.

Conclusion

This large identified a wide range of sexual orientation-related factors associated with suicidality that should be addressed by those supporting young LGB adults. The findings are consistent with the suggestion that LGB-stigma and discrimination contribute to LGB youth suicidality. LGB participants also shared risk factors with previous general population samples (e.g. previous depression / anxiety, childhood sexual abuse). Replication is required in

prospective studies but in the meantime, suicide interventions should address the fact that LGB youth have multiple LGB-related experiences that may contribute to their elevated suicide risk. Not only mental health provision but also legislation, education / work-based policies and anti-bullying strategies are required to protect LGB youth.

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Table 1. Proportion of participants (n=3275) reporting lifetime suicidal attempts, suicidal ideation over the past year and future risk

Suicide questions and responses	Women (n=1615)		Men (n=1660)		Total (n=3275)	
1) Have you ever thought about or tried to kill yourself?						
	N	**(%)**	**N**	**(%)**	**N**	**(%)**
Never	407	(25.2)	557	(33.6)	964	(29.4)
It was just a brief passing thought	480	(29.7)	571	(34.4)	1051	(32.1)
I have had a plan at least once to kill myself but did not try to do it	282	(17.5)	238	(14.3)	520	(15.9)
I have had a plan at least once to kill myself and really wanted to die	162	(10.0)	134	(8.1)	296	(9.0)
I have tried to kill myself but did not want to die	105	(6.5)	60	(3.6)	165	(5.0)
I have tried to kill myself and really hoped to die	179	(11.1)	100	(6.0)	279	(8.5)
Derived variable:						
Previous suicide attempt (either of final two responses)					*444*	*(13.6)*
2) How often have you thought about killing yourself in the past year?						
Never (includes those responding 'never' to Q1)	799	(49.5)	998	(60.1)	1797	(54.8)
1 time	204	(12.6)	192	(11.6)	396	(12.1)
2 times	162	(10.0)	152	(9.2)	314	(9.6)
3-4 times	185	(11.5)	148	(8.9)	333	(10.2)
5 or more times	265	(16.4)	170	(10.2)	435	(13.3)
Derived variable:						
Any suicidal ideation in past year					*1478*	(45.2)
3) How likely is it that you will commit suicide some day?						
No chances at all	645	(39.9)	840	(50.6)	1485	(45.3)
Rather unlikely	537	(33.3)	532	(32.0)	1069	(32.6)
Unlikely	230	(14.2)	179	(10.8)	409	(12.5)
Likely	127	(7.9)	68	(4.1)	195	(6.0)
Rather likely	48	(3.0)	27	(1.6)	75	(2.3)
Very likely	28	(1.7)	14	(0.8)	42	(1.3)
Derived variable:						
Future suicide is likely / rather likely / very likely					*312*	*(9.5)*

Table 2. Proportion of participants (n=3275) with the hypothesized risk factors

		Number responded	N	(%)
General risk factors	Female (versus male)	3275	1615	(49.3)
	Fewer than 5 friends to count on	3268	1741	(53.3)
	Previous help-seeking for anxiety or depression	3274	1257	(38.4)
	Abuse or violence from someone close	3272	869	(26.6)
	Sex abuse below age of 16	3206	337	(10.3)
	Weekly drug use	3121	229	(7.0)
	Alcohol use (AUDIT score)	3041	Mean:5.9(SD2.5)	
LGB specific factors				
Individual	Bisexual (versus lesbian/gay)	3275	859	(26.2)
	Aged below 10 years when thought LGB	3184	395	(12.1)
	First told someone was LGB below age 16 years	3156	1401	(44.4)
	Half or more friends are LGB	3270	1031	(31.5)
Stigma experiences	Not feeling accepted where live now	3208	512	(15.6)
	Bad reaction from mother or father to coming out	2325	716	(30.8)
	Bad reaction from first sibling to coming out	2050	338	(16.5)
	Bad reaction from first friend to coming out	3135	264	(8.4)
School stigma	Staff not speaking up constistently against LGBTQ prejudice	3262	2917	(89.4)
	Students not speaking up against LGBTQ prejudice	3266	2881	(88.2)
	Lessons referred to LGBTQ issues or negatively	3254	232	(7.1)
LGBTQ Victimisation	Harassment (being outed, verbal abuse, threat / intimidation, or harassment)	3267	2816	(86.0)
	Crime (blackmail, theft, property damage or physical assault)	3260	966	(29.5)

Table 3. Results of univariate regression analyses for lifetime suicide attempts, past-year suicidal ideation and future suicide risk

		Suicide attempt	Suicidal ideation	Future suicide risk
General factors	**N**	**OR (95% CI)**	**OR (95% CI)**	**OR (95% CI)**
Female gender	3275	2.00 (1.63-2.46)**	1.54(1.34-1.77)**	2.05(1.60-2.61)**
Fewer than 5 friends to count on	3268	1.87 (1.51-2.30)**	2.05(1.79-2.37)**	2.78(2.14-3.62)**
Help-seeking depression / anxiety	3274	5.71 (4.56-7.15)**	3.14(2.71-3.64)**	4.29(3.33-5.53)**
Abuse or violence	3272	4.09 (3.33-5.03)**	2.42(2.07-2.84)**	2.84(2.24-3.61)**
Sexual abuse below age 16	3206	5.11 (3.98-6.56)**	2.84(2.23-3.61)**	4.54(3.44-6.00)**
Alcohol misuse	3041	1.06 (1.02-1.11)*	1.00 (0.97-1.02)	1.04 (0.99-1.09)
Weekly drug use	3121	2.87 (2.11-3.89)**	1.92(1.46-2.53)**	2.90(2.06-4.08)**
Past suicide attempt	3275	-	-	12.79(9.90-16.5)**
LGB-related factors				
Individual: Bisexual (vs LG)	3275	1.70 (1.37-2.10)**	1.67(1.42-1.95)**	2.09(1.65-2.66)**
Thought LGB below age 10 yrs	3184	2.01 (1.54-2.61)**	1.25(1.01-1.54)*	1.69(1.24-2.31)**
Interpersonal: Came out <16 yrs	2732	2.19 (1.77-2.70)**	1.34(1.16-1.54)**	1.76(1.39-2.24)**
Half or more friends LGB	3270	1.51 (1.23-1.86)**	.96(.83-1.11)	1.33(1.04-1.69)*
Not feeling accepted where live	3208	2.74 (2.18-3.46)**	2.30(1.89-2.79)**	2.15(1.63-2.82)**
Bad reaction-Father	1830	1.93 (1.47-2.54)**	1.48(1.22-1.82)**	1.74(1.24-2.44)**
Bad reaction- Mother	2325	1.65 (1.29-2.10)**	1.32(1.10-1.57)**	1.58(1.17-2.12)**
Bad reaction -Sibling	2050	1.96 (1.46-2.62)**	1.40(1.11-1.78)*	1.77(1.24-2.53)**
Bad reaction- Friend	3135	2.71 (2.02-3.63)**	1.78(1.38-2.30)**	1.92(1.35-2.74)**
School: Staff not speaking up	3262	1.87 (1.26-2.80)**	1.67 (1.3-2.1)**	2.68(1.55-4.64)**
Students not speaking up	3266	1.44 (1.02-2.04)*	1.14 (0.92-1.4)	1.10 (0.76-1.60)
School lessons negative	3254	2.36 (1.7-3.24)**	1.66 (1.27-2.2)**	2.50(1.77-3.55)**
LGBTQ Victimization: Harassment	3267	1.76 (1.25-2.48)**	1.43(1.17-1.77)**	1.63(1.09-2.42)*
Crime	3260	2.81 (2.29-3.45)**	1.66(1.42-1.93)**	2.07(1.64-2.63)**

*p<0.05; **p<0.0023, the alpha value after correction for multiple testing. LGB = lesbian, gay or bisexual.

Table 4. Results of multivariate logistic regression analyses for lifetime suicide attempts, past-year suicidal ideation and future suicide risk

	Suicide attempt (n=2744)	**Suicidal ideation** ((n=2820)	**Future risk** (n=2493)	**Future risk of suicide** [a] (n=2747)
	Multivariate OR (95% CI)	Multivariate OR (95% CI)	Multivariate OR (95% CI)	Multivariate OR (95% CI)
		General factors		
Female gender	1.51 (1.14-1.90)**	1.05 (0.87-1.25) .	1.25 (0.91-1.73)	1.04 (0.74-1.46)
Fewer than 5 friends to count on	1.33 (1.02-1.72)*	1.79(1.52-2.11)***	2.28 (1.67-3.22)***	2.24 (1.61-3.12)***
Help-seeking for depression / anxiety	3.89 (2.97-5.07)***	2.54(2.14-3.02)***	2.79(2.06-3.76)***	1.87 (1.35-2.59)***
Abuse or violence	1.72 (1.33-2.24)***	1.56(1.28-1.90)***	1.41 (1.04-1.91)*	1.23 (0.89-1.69)
Sex abuse below 16	2.25 (1.63-3.09)***	1.71(1.28-2.29)***	2.44 (1.72-3.44)***	1.94 (1.33-2.81)**
Weekly drug use	1.58 (1.07-2.33)*	1.34 (0.97-1.84)	1.63 (1.07-2.49)*	1.38 (0.87-2.19)
Past suicide attempt	---	---	---	7.69(5.56-10.64)***
		LGB factors		
Individual				
Bisexual (vs L/G)	1.50 (1.14-1.99)**	1.50(1.23-1.82)***	1.85 (1.36-2.51)***	1.79 (1.30-2.48)***
Thought LGB below age 10 years	1.24 (0.88-1.73)	---	1.18 (0.80-1.73)	1.09 (0.72-1.64)
Interpersonal				
Not feeling accepted where live	1.93(1.44-2.60)***	1.86(1.48-2.35)***	1.30 (0.92-1.82)	1.02 (0.71-1.47)
Came out <16 yrs	1.53 (1.18-1.97)**	1.19 (1.01-1.41)*	1.45 (1.08-1.93)*	1.32 (0.97-1.79)
Bad reaction- Friend	1.34 (0.93-1.93)	1.00 (0.74-1.36)	1.09 (0.72-1.65)	0.97 (0.62-1.52)
50%+ friends LGB	1.20 (0.93-1.55)	---	---	---
School				
Staff not speak up	1.32 (0.80-2.18)	1.42 (1.07-1.87)*	1.82 (0.95-3.46)	1.77 (0.89-3.49)
Lessons negative	1.16 (0.77-1.75)	1.16 (0.90-1.49)	1.71 (1.11-2.64)*	1.78 (1.11-2.83)*
LGB victimisation				
LGB harassment	1.17 (0.74-1.85)	1.16 (0.90-1.49)	---	
LGB crime	1.79 (1.36-2.37)***	1.13 (0.93-1.37)	1.29 (0.94-1.76)	0.94 (0.70-1.38)

*p<0.05, ** p<0.005, *** p<0.0005. LGB = lesbian, gay or bisexual. [a] Including past suicide attempts in regression